

REMARKS

Claims 16-17, 24-25, 27, 44-46, 48-50, 70-89, and 117-130 were pending. The applicants amend claims 44 and 121. The applicants present claims 16-17, 24-25, 27, 44-46, 48-50, 70-89, and 117-130 for examination in view of the amendments and the following remarks.

Interview

The applicants thank Examiner Ware for the telephone interview conducted with the undersigned attorney on October 19, 2009. The pending rejections, claim 44, and the references cited in the pending office action were discussed. No agreement was reached.

Double Patenting

Claims 44, 45, 46, 58, and 121-122 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16, 17, 19, 20-22, and 24 of copending Application No. 11/726,230. The applicants request that the double patenting rejection be held in abeyance until the claims are otherwise in condition for allowance.

Claim Rejections- 35 USC § 103

Claims 16-17, 24-25, 27, 44-46, 48-50, 70-89, and 117-130 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over U.S. Pat. No. 7,258,774 ("Chou") in view of U.S. Pub. No. 2002/0119482 ("Nelson"), and U.S. Pat. No. 7,081,192 ("Wang").

Claims 1 and 121 recites flowing a past a series of obstacles in the channel, "the obstacles fixed in position separated by gaps arranged so that flow of the [] sample past the obstacles directs adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells in a first direction and directs cells larger than adult, enucleated red blood cells in a second direction[.]"

Chou has not been shown to describe or make obvious obstacles in a channel "fixed in position separated by gaps arranged so that flow of the blood sample past the obstacles directs" cells of one size or smaller in a first direction and larger cells in a second direction. In contrast to the passive system claimed by the applicants, Chou describes a system in which

an entity is flowed by the pump along a flow channel through a detection region to a junction. Based upon an identity of the entity determined in the detection region, a waste or collection valve located on opposite branches of the flow channel at the junction are actuated, thereby routing the entity to either a waste pool or a collection pool.¹

In one section cited by the examiner,² Chou describes “a flow channel grid defined by an array of solid posts 92, each having flow channels passing therearound.”³ However, the direction of flow through the solid posts is controlled by the pressure-activated selective downward deflection of portions of an elastomeric layer overlying the posts⁴ rather than the solid posts being “fixed in position separated by gaps arranged so that flow of the blood sample past the obstacles directs adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells in a first direction and directs cells larger than adult, enucleated red blood cells in a second direction” as claimed by the applicants.

The examiner noted that Chou uses the term passive feature to describe channels.⁵ However, flow through these channels is controlled using “actuation of thin elastomer layer 5802 to drive it into channel 5808 [to] cause composite structure 5810 to operate as a valve”⁶ not by “obstacles fixed in position separated by gaps arranged so that flow of the blood sample past the obstacles directs adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells in a first direction and directs cells larger than adult, enucleated red blood cells in a second direction” as claimed by the applicants.

For at least these reasons, Chou has not been shown to describe or make obvious methods using “obstacles fixed in position separated by gaps arranged so that flow of the blood sample past the obstacles directs adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells in a first direction and directs cells larger than adult, enucleated red blood cells in a second direction” as claimed by the applicants.

Neither Nelson (cited as allegedly describing binding moieties) nor Wang (cited as allegedly describing using a microfluidic device wherein structure is combined with capture

¹ Chou, abstract.

² See the office action dated April 21, 2009, page 6.

³ Chou, col. 22, lines 20-22.

⁴ See, e.g., Chou, col. 22, lines 23-56.

⁵ See, e.g., Chou, col. 24, lines 64-65.

⁶ Chou, col. 24, lines 43-45.

agents) has been asserted to describe or make obvious the features lacking in Chou. Thus, Chou, Nelson, and Wang, alone or in combination, have not been shown to describe or make obvious all of the features of the independent claims. All of the dependent claims are patentable for at least similar reasons as those for the claims on which they depend are patentable. Accordingly, the applicants request that the rejection of claims 16-17, 24-25, 27, 44-46, 48-50, 70-89, and 117-130 as being unpatentable over Chou in view of Nelson and Wang be withdrawn.


Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicants have (a) addressed certain comments of the examiner does not mean that the applicants concede other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicants concede any of the examiner's positions with respect to that claim or other claims.

The fees in the amount of \$555 for a 3-month extension of the period for response are being paid concurrently herewith on the Electronic Filing System by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 25594-0002US1.

Respectfully submitted,

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